REMARKS/ARGUMENTS

1. Introduction

This is a full and timely response supplemental response to the Office Action of September 28, 2009. No claims are amended and rationale is presented differentiating current claims over cited art. No new material has been introduced. Reconsideration of the application is respectfully requested.

2. Background

Claims 1, 7, 17-19, 21, and 24 are rejected under 35 U.S.C 103(a) as being unpatentable over Crump (US 5,580,562) in view of Sanchez (US 6,477,666) and further in view of Hundt (US 2004/0205720). Claims 3-4 and 8 are rejected under 35 U.S.C 103(a) as being unpatentable over Crump (US 5,580,562) in view of Sanchez (US 6,477,666) and Hundt (US 2004/0205720) and further in view of Phillips (US 5,321,828). Claim 6 is rejected under 35 U.S.C 103(a) as being unpatentable over Crump (US 5,580,562) in view of Sanchez (US 6,477,666) and Hundt (US 2004/0205720) and in further view of Robinson (US 5,768,591). Claim 23 is rejected under 35 U.S.C 103(a) as being unpatentable over Crump (US 5,580,562) in view of Sanchez (US 6,477,666) and Hundt (US 2004/0205720) and in further view of Treu (US 5,245,615).

4. Response

The Examiner's opinion is Crump (US 5,850,562) teaches debugging BIOS code using breakpoints and it would be obvious to include Sanchez's fault injection method into Crump's method. However, the current claims are different from Crump at least for the following reasons.

All claims contain the limitations of (from claim 1) "*setting a plurality of breakpoints corresponding to a plurality of events in a Basic Input/Output System (BIOS) program code,* ***each event being a test executed by the BIOS program code to a peripheral device*** *and taking a general processing path when the peripheral device is working well or an error processing path when the peripheral device is in an error*

state". Therefore the code that is being checked includes testing peripheral devices.

Turning now to Crump who uses slightly different semantics, Col.1, lines 55-65 say that code involved in testing peripheral devices is call "POST". As the Examiner is aware, the applicant is permitted freedom of semantics within an application and at least because of the specific definition recited within each claim of ***each event being a test executed by the BIOS program code to a peripheral device***, one skilled in the art would readily understand that Crump's "POST" code does the same testing as the present BIOS program code.

FIG.4 of Crump shows that a "Partial POST" 110 is performed before transferring control to the debugger routine 118. FIG.5 shows the Partial Post 122 includes testing CPU, Memory, and a serial controller. Col.7, lines 38-45 say "*The partial POST must* ***at a minimum initialize the system for the operation of the monitor and debugger routine, which would necessarily include initializing the communications controller to generate the communications link 107 between the computer system 10 and the external communications device 106***." (Emphasis added).

Therefore, as Crump's disclosure teaches external devices already functioning before the debugger routine is initialized, it is impossible for Crump's disclosure to execute both paths of the code for testing the external device as is claimed. "*As so invoked, the monitor and debugger routine can be used to facilitate the design and debugging of the* ***remaining portion****s of the system initialization code*" (Abstract). This is undeniably different than the present disclosure especially when some claims, claim 21 for example, even say that each path of each event is checked.

Secondly, the Examiner points out (Page 4) that Crump does not explicitly disclose setting/resetting a parameter to simulate the peripheral device being in the error state throughout execution of the event corresponding to the diagnosis code and references Sanchez as teaching automatically injecting faults and errors throughout execution. It is strongly noted that debugging a JAVA program as Sanchez teaches is impossible when the operating system is not yet functioning as **required** in Crump

because JAVA requires the OS to run. However, the Examiner has suggested (Page 5) that it is obvious "to use Sanchez's fault injection methods to simulate the error state of [a] peripheral device in Crump" to "test the reliable and proper handling of various faults and exceptions under various conditions".

MPEP section 2142 describes, "The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." While the applicant is not asserting that hindsight is motivating the suggested combination, it is difficult to understand how this combination of arts is to be accomplished, and on this point the Examiner has not commented.

Moreover, the Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" KSR, 550 U.S. at ___, 82 USPQ2d at 1396.

Therefore, the Examiner should provide explicit articulated reasoning with some rational underpinning to support the legal conclusion of obviousness to justify why a person skilled in the art would be directed to combine the teachings when doing so would require undue experimentation due at least to Sanchez requiring a fully functioning OS which is incompatible with the teachings of Crump. Furthermore, there is no reasonable expectation of success (MPEP 2143.02) because, as pointed out above, Crump performs some testing of peripheral devices before the debugging program can be utilized.

5. Summary

Known references fail to teach executing both the error processing path and the general processing path of each event and therefore fail to meet every claim limitation. Crump fails to test all peripheral devices and cannot be combined with Sanchez with a reasonable expectation of success.

For at least these reasons, the applicant respectfully requests reconsideration of the application is respectfully requested.

Sincerely yours,

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